TABLE OF CONTENTS

No. 1. January 1943

Cortical response of the anesthetized cat to gross photic and electrical afferent stimulation. W. H. MARSHALL, S. A. TALBOT AND H. W. ADES 1

The effect of skeletal fixation on skeletal muscle. D. Y. SOLANDT, RUTH C. PARTRIDGE AND JOHN HUNTER 17

Intravenous potassium, calcium and magnesium and the cortical electrogram of the cat. M. A. RUBIN, H. E. HOFF, A. W. WINKLER AND P. K. SMITH 23

Thermoregulatory pathways in the cat brain stem. L. E. BEATON, C. R. LEININGER AND W. A. MCKINLEY 29

Spinal distribution of thermoregulatory pathways in the monkey. L. E. BEATON AND C. R. LEININGER 37

The response of single auditory-nerve fibers to acoustic stimulation. R. GALAMBOS AND H. DAVIS 39

A secondary acoustic area in the cerebral cortex of the cat. H. W. ADES 59

The pseudaffective state and decerebrate rigidity in the sloth. S. W. BRITTON AND R. F. KLINE 65

No. 2. March 1943

Investigation of epileptiform attacks produced by sudden cooling of frog spinal cord. M. OZORIO DE ALMEIDA 73

Effect of hypothalamic lesions on electrical activity of cerebral cortex. S. OBRADOR 81

Electrical polarization of pacemaker neurons. T. H. BULLOCK, H. S. BURR AND L. F. NIMS 85

Specific excitability of the endplate region in normal and denervated muscle. S. W. KUFFLER 99

Reflex action in relation to pattern and peripheral source of afferent stimulation. D. P. C. LLOYD 111

Functional organization of temporal lobe of monkey (*Macaca mulatta*) and chimpanzee (*Pan satyrus*). P. BAILEY, G. VON BONIN, H. W. GAROL AND W. S. MCCULLOCH 121

Long association fibers in cerebral hemispheres of monkey and chimpanzee. P. BAILEY, G. VON BONIN, H. W. GAROL AND W. S. MCCULLOCH 129

The effect of oxygen tension on the metabolism of cerebral cortex, medulla and spinal cord. F. N. CRAIG AND H. K. BEECHER 135

The interaction of antidromic and orthodromic volleys in a segmental spinal motor nucleus. D. P. C. LLOYD 143

No. 3. May 1943

The monkey (*Macaca mulatta*) after hemisection and subsequent transection of spinal cord. G. P. McCouch, J. Hughes and Winifred B. Stewart 155

The effect of insulin hypoglycemia on conditioned reflexes. E. Gellhorn and H. Minatoya 161

Cortical localization of symbolic processes in the rat: II. Effect of cortical lesions upon delayed alternation in the rat. C. T. Morgan and W. M. Wood 173

Motor response to stimulation of cerebral cortex in absence of areas 4 and 6 (*Macaca mulatta*). M. A. Kennard and W. S. McCulloch 181

Sweat gland responses to sympathetic stimulation studied by the galvanic skin reflex method. C. P. Richter and F. Whelan 191

Localization of the salivatory center in the medulla of the cat. S. W. Wang 195

Localization of enzymes in nerves. II. Respiratory enzymes. D. Nachmansohn, H. B. Steinbach, A. L. Machado and S. Spiegelman 203

Mechanism of temporal fusion. Effect of photic stimulation on electrical activity of visual structures. A. E. Walker, J. I. Woolf, W. C. Halstead and T. J. Case. 213

No. 4. July 1943

Stephen Walter Ranson. An appreciation 223

Temperature effects on reflexes of isolated spinal cord. Heat paralysis and cold paralysis. M. Ozorio de Almeida 225

Electroencephalogram of decorticate monkeys. M. A. Kennard 233

Spontaneous electrical activity of thalamus and other forebrain structures. R. S. Morison, K. H. Finley and G. N. Lothrop 243

Acute physiological effects of gunshot and other penetrating wounds of the brain. J. E. Webster and E. S. Gurdjian 255

Experimental investigation of visceral afferent synapses in coeliac ganglia. S. Freund and D. Sheehan 263

Pressure block in nerves provided with arterial sleeves. P. Weiss and H. Davis 269

Note on organization of the tactile sensory area of cerebral cortex of chimpanzee. C. N. Woolsey, W. H. Marshall and P. Bard 287

Neuron patterns controlling transmission of ipsilateral hind limb reflexes in cat. D. P. C. Lloyd 293

Conduction and synaptic transmission of reflex response to stretch in spinal cats. D. P. C. Lloyd 317

No. 5-6. September-November 1943

Acetylcholine level of rat cerebral cortex under conditions of anoxia and hypoglycemia. J. H. Welsh 329

Accommodation and autorhythmic mechanism in single sensory fibres. R. Granit and C. R. Skoglund 337

The relation of area 13 on orbital surface of frontal lobes to hyperactivity and hyperphagia in monkeys. T. C. RUCH AND H. A. SHENKIN 349

Responses to electrical stimulation of single sensory units of skin. G. H. BISHOP 361

Action potential and enzyme activity in the electric organ of *Electrophorus electricus*. II. Phosphocreatine as energy source of the action potential. D. NACHMANSOHN, R. T. COX, C. W. COATES AND A. L. MACHADO 383

The formation of acetylcholine. A new enzyme: "Choline acetylase." D. NACHMANSOHN AND A. L. MACHADO 397

Effects of EEG of chronic lesions of basal ganglia, thalamus and hypothalamus of monkeys. M. A. KENNARD 405

Hand and foot patterns of low electrical skin resistance: Their anatomical and neurological significance. C. P. RICHTER, B. G. WOODRUFF AND B. E. EATON 417

Nature of paresis following lateral cortico-spinal section in monkeys. B. W. CANNON, L. F. BEATON AND S. W. RANSON, JR. 425

Removal of acetylcholine by cholinesterase injections and the effect thereof on nerve impulse transmission. B. MENDEL AND R. D. HAWKINS 431

The basis for repetitive activity in phrenic motoneurons. R. F. PITTS 439

Index 455